

AN INQUIRY INTO THE RELATION OF TASTES  
AND ALIMENTS TO EACH OTHER AND INTO THE  
INFLUENCE OF THIS RELATION UPON HEALTH  
AND PLEASURE.

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by

Benj. Rush, M.D.

in

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moral obligations: for virtue bears a strong resemblance to vice, its natural enemy, in one of the striking traits of its character; like the latter, it is contagious, as the least spark of vice will by example impart, from one to another, with the rapidity of a pestilence, its noxious taint, and corrupt a whole neighbourhood. So virtue, like this and every other habit, can be propagated by imitation. By example it will travel and insinuate itself from the highest to the lowest order of human beings, for in the composition of every rank and degree, even from the greatest king on his throne, down to the meanest beggar in the street, enter the same principles of nature.

Thus, gentlemen, in taking leave of my subject, I feel an unfeigned pleasure in anticipating the satisfaction I hope ere long we shall experience, in being able joyously to congratulate each other on the happy rewards the virtuous citizens of America will be entitled to receive, for their united efforts in effecting the great revolution we are now in eager pursuit of. But above all, I feel a more sincere and interested pleasure in thinking, that our young institution may deserve at least a small share of the merit of performing some part of that noble work. By our industry, by the vigour of our exertions, and by all the other means this society can furnish, promote, and encourage, and in a particular manner by the prudent examples of its members individually, I make not the least doubt, but that we shall be able not only to attain the more perfect knowledge of agriculture and the useful arts of manufacturing, which are the natural employment of man, especially in this country; but that in our respective neighbourhoods we shall assist others to lay the solid foundations of all those political and national virtues, which must endure for ages to come, as so many illustrious monuments of the triumphant and glorious reign of wealth, strength, morality, and human happiness, over the ignominious misfortunes of luxury, indolence, vice, poverty and misery.



*An enquiry into the relation of tastes and aliments to each other: and into the influence of this relation*

*upon health and pleasure. From medical enquiries and observations.*

—By Benjamin Rush, M. D. professor of chemistry in the university of Pennsylvania.—Printed and sold by Prichard and Hall.

I N entering upon this subject, I feel like the clown, who, after several unsuccessful attempts to play upon a violin, threw it hastily from him, exclaiming at the same time, that “there was music in it,” but that he could not bring it out.

I shall endeavour, by a few brief remarks, to lay a foundation for more successful enquiries upon this difficult subject.

Attraction and repulsion seem to be the active principles of the universe. They pervade not only the greatest but the minutest works of nature. Salts, earths, inflammable bodies, metals, and vegetables, have all their respective relations to each other. The order of these relations is so uniform, that it has been ascribed by some philosophers to a latent principle of intelligence pervading each of them.

Colours, odours, and sounds, have likewise their respective relations to each other. They become agreeable and disagreeable, only in proportion to the natural or unnatural combination which takes place between each of their different species.

It is remarkable, that the number of original colours and notes in music is exactly the same. All the variety in both proceeds from the difference of combination. An arbitrary combination of them is by no means productive of pleasure. The relation which every colour and sound bear to each other, was as immutably established at the creation, as the order of the heavenly bodies, or as the relation of the objects of chemistry to each other.

But this relation is not confined to colours and sounds alone. It probably extends to the objects of human aliment. For example: bread and meat, meat and salt, the alkaliescent meats and acescent vegetables, all harmonize with each other upon the tongue: while fish and flesh, butter and raw onions, fish and milk, when combined, are all offensive to a pure and healthy taste.

It would be agreeable to trace the an-

alogy of sounds and tastes. They have both their flats and their sharps. They are both improved by the contrast of discords. Thus pepper, and other condiments, (which are disagreeable when taken by themselves) enhance the relish of many of our aliments, and they are both delightful in proportion as they are simple in their composition. To illustrate this analogy by more examples from music, would lead us from the subject of the present enquiry.

It is observable that the tongue and the stomach, like instinct and reason, are, by nature, in unison with each other. One of these organs must always be disordered, when they disagree in a single article of aliment. When they both unite in articles of diet, that were originally disagreeable, it is owing to a perversion in each of them, similar to that which takes place in the human mind, when both the moral faculty and the conscience lose their natural sensibility to virtue and vice.

Unfortunately for this part of science, the taste and the stomach are so much perverted in infancy and childhood by heterogeneous aliments, that it is difficult to tell what kinds and mixtures of food are natural, and what are artificial. It is true, the system possesses a power of accommodating itself both to artificial food, and to the most discordant mixtures of that which is natural; but may we not reasonably suppose, that the system would preserve its natural strength and order much longer, if no such violence had been offered to it.

If the relation of aliments to each other follows the analogy of the objects of chemistry, then their union will be influenced by many external circumstances, such as heat and cold, dilution, concentration, rest, motion, and the addition of substances which promote unnatural, or destroy natural mixtures. This idea enlarges the field of enquiry before us, and leads us still further from facts and certainty upon this subject, but at the same time it does not preclude us from the hope of obtaining both; for every difficulty that arises out of this view of the subject, may be removed by observation and experiment.

I come now to apply these remarks to health and pleasure. I shall select

only a few cases for this purpose; for if my principles are true, my readers cannot avoid discovering many other illustrations of them.

1. When an article of diet is grateful to the taste, and afterwards disagrees with the stomach, may it not be occasioned by some other kind of food, or by some drink being taken into the stomach, which refuses to unite with the offending article of diet?

2. May not the uneasiness, which many persons feel after a moderate meal, arise from its having consisted of articles of aliment which were not related to each other?

3. May not the delicacy of stomach which sometimes occurs after the fortieth or forty-fifth year of human life, be occasioned by nature recovering her empire in the stomach, so as to require simplicity in diet, or such articles only of aliment, as are related? May not this be the reason why most people, who have passed those periods of life, are unable to retain or to digest fish and flesh at the same time, and why they generally dine only upon one kind of food?

4. Is not the language of nature in favour of simplicity in diet, discovered by the avidity with which the luxurious and intemperate often seek relief from variety and tasteless, by retreating to spring water for drink, and to bread and milk for aliment?

5. May not the reason why plentiful meals of fish, venison, oysters, beef, or mutton, when eaten alone, lie so easily in the stomach, and digest so speedily, be occasioned by no other food being taken with them? A pound, and even more, of the above articles, frequently oppress the system much less than half the quantity of heterogeneous aliments.

6. Does not the facility with which a due mixture of vegetable and animal food digests in the stomach, indicate the certainty of their relation to each other?

7. May not the peculiar good effects of a diet wholly vegetable or animal, be occasioned by the more frequent and intimate relation of the articles of the same kingdoms to each other? and may not this be the reason why so few inconveniencies are felt from the mixture of a variety of vegetables in the stomach?

8. May not the numerous acute and chronic diseases of the rich and luxurious, arise from heterogeneous aliments being distributed in a diffused, instead of a mixed state, through every part of the body?

9. May not the many cures which are ascribed to certain articles of diet, be occasioned more by their being taken alone, than to any medicinal quality inherent in them? A diet of oysters in one instance, of strawberries in another, and of sugar of roses in many instances, has cured violent and dangerous disorders of the breast\*. Grapes, according to doctor Moore, when eaten in large quantities, have produced the same salutary effect. A milk diet, persisted in for several years, has cured the gout. I have seen many cases of dyspepsia cured by a simple diet of beef or mutton, and have heard of a well attested case of a diet of veal alone having removed the same disorder. Squashes and turnips likewise, when taken by themselves, have cured that distressing complaint in the stomach. It has been removed even by milk, when taken by itself in a moderate quantity†. The further the body, and more especially the stomach, recede from health, the more this simplicity of diet becomes necessary. The appetite in these cases does not speak the language of uncorrupted nature. It frequently calls for various and improper aliment; but this is the effect of intemperance having produced an early breach between the taste and the stomach.

Perhaps the extraordinary cures of obliquate diseases, which are sometimes performed by persons not regularly educated in physic, may be occasioned by a long and steady perseverance in the use of a single article of the materia medica. Those chemical medicines which decompose each other, are not the only substances which defeat the intention of the prescriber. Galenical medicines, by combination, I believe, frequently produce effects that are of a compound and contrary nature to their original and simple qualities. This

remark is capable of extensive application, but I quit it as a digression from the subject of this enquiry.

10. I wish it to be observed, that I have condemned the mixture of different aliments in the stomach only in a few cases, and under certain circumstances. It remains yet to determine by experiments, what changes are produced upon aliments by heat, dilution, addition, concentration, motion, rest, and the addition of uniting substances, before we can decide upon the relation of aliments to each other, and the influence of that relation upon health. The *olla podrida* of Spain, is said to be a pleasant and wholesome dish. It is probably rendered so, by a previous tendency of all its ingredients to putrefaction, or by means of heat producing a new arrangement, or addition new relations of all its parts. I suspect heat to be a powerful agent in disposing heterogeneous aliments to unite with each other; and hence a mixture of aliments is probably less unhealthy in France and Spain, than in England, where so much less fire is used in preparing them than in the former countries.

As too great a mixture of glaring colours, which are related to each other, becomes painful to the eye, so too great a mixture of related aliments oppresses the stomach, and debilitates the power of the system. The original colours of the sky, and of the surface of the globe, have ever been found the most permanently agreeable to the eye. In like manner, I am disposed to believe that there are certain simple aliments which correspond, in their sensible qualities, with the intermediate colours of blue and green, that are most permanently agreeable to the tongue and stomach, and that every deviation from them is a departure from the simplicity of health and nature.

11. While nature seems to have limited us to simplicity in aliment, is not this restriction abundantly compensated by the variety of tastes which she allows us to impart to it in order to diversify and increase the pleasure of eating? it is remarkable that salt, sugar, mustard, horse-radish, capers, and spices of all kinds, according to Mr. Gosse's experiments, related by

#### NOTES.

\* Vanswieten, 1790, 3.

† Medical observations and enquiries, vol. 6. p. 310, 319.



abbe Spallanzani\*, all contribute not only to render aliments savoury, but to promote their digestion.

12. When we consider, that part of the art of cookery consists in rendering the taste of aliments agreeable, is it not probable that the pleasure of eating might be increased beyond our present knowledge upon that subject, by certain new arrangements or mixtures of the substances which are used to impart a pleasant taste to our aliment?

13. Should philosophers ever stoop to this subject, may they not discover and ascertain a table of the relation of sapid bodies to each other, with the same accuracy that they have ascertained the relation of the numerous objects of chemistry to each other?

14. When the tongue and stomach agree in the same kinds of aliment, may not the increase of the pleasure of eating be accompanied with an increase of health and a prolongation of life?

15. Upon the pleasure of eating, I shall add the following remarks. In order to render it truly exquisite, it is necessary that all the senses, except that of taste, should be as *quiescent* as possible. Those persons mistake the nature of the appetite for food, who attempt to whet it by accompanying a dinner by a band of music, or by connecting the dining table with an extensive and delightful prospect. The excitement of one sense, always produces collapse in another. Even conversation sometimes detracts from the pleasure of eating; hence great feeders love to eat in silence, or alone; and hence the speech of a passionate Frenchman, while dining in a talkative company, was not so improper as might at first be imagined. "Hold your tongues," said he, "I cannot taste my dinner." I know a physician, who, upon the same principle, always shuts his eyes, and requests silence in a sick chamber, when he wishes to determine by the pulse the propriety of blood-letting, in cases where its indication is doubtful. His perceptions become more distinct, by confining his whole attention to the sense of feeling.

## NOTE.

\* Desertations, vol. 1. page 326.

It is impossible to mention the circumstance of the senses acting only in succession to each other in the enjoyment of pleasure, without being struck by the impartial goodness of heaven, in placing the rich and the poor so much upon a level in the pleasures of the table. Could the numerous objects of pleasure, which are addressed to the ears and the eyes, have been possessed at the same time, with the pleasure of eating, the rich would have commanded three times as much pleasure in that enjoyment as the poor; but this is so far from being the case, that a king has no advantage over a beggar, in eating the same kind of aliment.



*Extracts from "observations on a variety of subjects, literary, moral and religious; in a series of original letters." By the rev. dr. Duche.—P. 501.*

## LETTER III.

To lord viscount P—

IN my last†, I furnished your lordship with as particular an account as I have been able to obtain of the many astonishing improvements, which a very few years have produced in this elegant and growing city. Common justice calls upon me to inform you, that some of the best institutions, that regard its internal police, are under the direction and management of the people called quakers, whose general disapprobation of all fashionable amusements and diversions, gives them leisure and opportunity of embarking in and prosecuting such schemes as are useful, as well as ornamental to human society. This sober, virtuous people generally engage with caution, but execute with the most persevering firmness and assiduity. The hospital and house of employment are standing monuments of their labours—and the period seems to be fast approaching, when the cause of literature will receive no small services from their attention and zeal. A philosophical society for the encouragement of science, arts and manufactures, hath been lately instituted in this city, which numbers many

## NOTE.

† See letter I.

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